

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-46 (Cancelled)

47. (Currently Amended) An implantable prosthesis, comprising:

(a) a prosthetic component having first and second surfaces, wherein the second surface is oriented toward a bone in which the component is to be implanted;

(b) at least two openings extending from the first surface to the second surface; each opening of the at least two openings comprising

(i) an upper portion comprising an extended non-threaded frustoconical taper section extending through a substantial portion of the opening and

(ii) a lower portion; and

(c) an insertion member having a head which includes a non-frustoconical contact surface ~~that comprises a slice of a sphere~~, wherein when the insertion member is inserted into the opening, a portion of the non-frustoconical contact surface contacts the frustoconical taper section of the upper portion of the opening, ~~a portion of the slice contacts the frustoconical taper section of the upper portion~~, and wherein the contact between the portion of the non-frustoconical contact surface of the head and the frustoconical ~~contact~~ taper section of the opening

(i) creates a self locking relationship between the insertion member and the opening to lock the insertion member in one of a plurality of desired angles relative to the opening so that the insertion member and the prosthesis form a rigid physical construct at each of the angles; and

(ii) forms a substantially fluid tight seal between the head and the opening, thereby preventing the escape of polyethylene wear particles to the outside of the prosthetic component; and wherein

- a) the head does not contact the lower portion of the opening;
- b) the head does not protrude beyond the first surface; and
- c) the opening is adapted to interchangeably receive (1) a screw having a threaded portion that allows the screw to be firmly implanted into the bone and (2) either a peg or a cover, wherein the self-locking relationship between the peg or the cover and the opening is formed using only a taper in the frustoconical taper section and a surface of the peg or the cover at least one of the insertion members selected from the group consisting of an aperture cover, a screw, a spike and a peg.

48. (Previously Presented) The implantable prosthesis of claim 47, wherein the lower portion of the opening is a curved surface, a rounded surface, or a spherical surface.

49. (Previously Presented) The implantable prosthesis of claim 47, wherein the head of the insertion member comprises an outer edge that is spherical, near-spherical, toroidal, elliptical, global, slightly curved, or rounded.

50. (Previously Presented) The implantable prosthesis of claim 47, wherein the prosthesis comprises a hip replacement system and wherein the first and second surfaces are surfaces of an acetabular cup.

51. (Currently Amended) The implantable prosthesis of claim 47, wherein the lower portion of the opening comprises a rounded section beginning at a narrow end of the frustoconical taper section and having a smaller diameter than the frustoconical taper section.

52. (Previously Presented) The implantable prosthesis of claim 47, wherein, when the insertion member is inserted into the opening, there is a gap between the second surface of the prosthetic component and the insertion member head.

53. (Currently Amended) The implantable prosthesis of claim 47, wherein at least one of the at least two openings comprises a chamfer edge, an upper portion comprising a conical taper, a lower portion comprising a rounded section, and a cylindrical portion, wherein

- (i) the chamfer edge is formed where the opening meets the first surface;
- (ii) the chamfer edge meets the upper portion and wherein the conical taper of the upper portion extends through a substantial portion of the opening,
- (iii) the upper portion meets the lower portion comprising a rounded section at a narrow end of the conical taper; and
- (iv) the lower portion ends at the second surface at the cylindrical portion.

54. (Previously Presented) The implantable prosthesis of claim 53, wherein the rounded section has a smaller diameter than the conical taper.

55. (Currently Amended) The implantable prosthesis of claim 47, wherein the contact surface of the insertion member defines a slice of a sphere, wherein the contact surface is substantially in the middle of the sphere ~~the slice of the sphere comprises a center point of the sphere.~~

56. (Currently Amended) An implantable prosthesis, comprising:

- (a) a prosthetic component having first and second surfaces, wherein the second surface is oriented toward a bone in which the component is to be implanted;

(b) at least two openings extending from the first surface to the second surface; each opening of the at least two openings comprising a non-threaded frustoconical taper section extending through a substantial portion of the opening; and,

(c) an insertion member having a head comprising an outer rim ~~falling on a slice of a sphere containing a center point of the sphere~~, wherein, when the insertion member is inserted into the opening, a portion of the rim contacts the frustoconical taper section of the upper portion of the opening, and wherein the contact between the portion of the rim ~~non-frustoconical contact surface of the head~~ and the frustoconical taper section creates a self locking relationship between the insertion member and the opening to lock the insertion member in one of a plurality of desired angles relative to the opening so that the insertion member and the prosthesis form a rigid physical construct at each of the angles; and

wherein the opening is adapted to interchangeably receive (1) a screw having a threaded portion that allows the screw to be firmly implanted into the bone and (2) either a peg or a cover, wherein the self-locking relationship between the peg or the cover and the opening is formed using only a taper in the frustoconical taper section and a surface of the peg or the cover.

57. (Currently Amended) An implantable prosthesis, comprising:

(a) a prosthetic component having first and second surfaces, wherein the second surface is oriented toward a bone in which the component is to be implanted;

(b) at least two openings extending from the first surface to the second surface; each of the at least two openings comprising a non-threaded frustoconical taper section extending through a substantial portion of the opening; and,

(c) an insertion member having a head which includes a non-frustoconical contact surface ~~comprising an outer rim falling on a slice of a sphere~~, wherein, when the

insertion member is inserted into the opening, a portion of the ~~[[rim]]~~ non-frustoconical contact surface contacts the frustoconical taper section of the upper portion of the opening, and wherein the contact between ~~a portion of the rim~~ the portion of the non-frustoconical contact surface of the head and the frustoconical ~~contact~~ taper section locks the insertion member in one of a plurality of desired angles relative to the opening so that the insertion member and the prosthesis form a rigid physical construct at each of the angles; and

wherein the opening is adapted to interchangeably receive (1) a screw having a threaded portion that allows the screw to be firmly implanted into the bone and (2) either a peg or a cover, wherein the self-locking relationship between the peg or the cover and the opening is formed using only a taper in the frustoconical taper section and a surface of the peg or the cover.

58. (Currently Amended) The implantable prosthesis of claim 5~~[[8]]~~6, wherein the outer rim falls on a slice of a sphere, the slice of the sphere comprising a center point of the sphere.